6.    THE CLAIMS

It is claimed:

1.   In a computer system having a first repeater and a second repeater, the first repeater coupled to the second repeater by a bus, the first repeater operable to transmit a

5    transaction and a control signal to the second repeater, a method, performed by the second repeater, of generating an error comprising:

   a)   predicting, in a first cycle, that a transaction should be transmitted from the first repeater to the second repeater;

   b)   determining if a control signal was received within a predetermined number of

10    cycles of the first cycle; and

   c)   if the control signal was not received within the predetermined number of cycles of the first cycle, then generating an error.


2.   The method of claim 1, wherein the act of predicting that a transaction should be

15    transmitted includes an arbiter predicting that the transaction should be transmitted.


3.   The method of claim 2, wherein the act of an arbiter predicting that the transaction should be transmitted includes a distributed arbiter predicting that the transaction should be transmitted.

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4.   The method of claim 2, wherein the act of the arbiter predicting that the transaction should be transmitted is based at least in part upon the arbiter receiving a second signal

from a third repeater.

5.  The method of claim 1, wherein the act of determining if the control signal was received includes determining if a valid transaction signal was received.

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6.  The method of claim 1, wherein the predetermined number of cycles is zero cycles.

7.  The method of claim 1 wherein the predetermined number of cycles is one cycle.

10  8.  In a computer system having a first repeater, a second repeater, and a third repeater, the first repeater coupled to the second repeater and the third repeater, the first repeater operable to transmit a transaction to the second repeater and operable to transmit a control signal to the third repeater, a method, performed by the third repeater, of generating an error comprising:

15      a)  predicting, in a first cycle, that a transaction that originated from the third repeater should be transmitted from the first repeater to the second repeater;

        b)  determining if a control signal was received within a predetermined number of cycles of the first cycle; and

        c)  if the control signal was not received within the predetermined number of cycles

20      of the cycle in which the prediction was made, then generating an error.

9.  The method of claim 8, wherein the act of predicting that a transaction should be transmitted includes an arbiter predicting that the transaction should be transmitted.

10. The method of claim 9, wherein the act of an arbiter predicting that the transaction

5       should be transmitted includes a distributed arbiter predicting that the transaction should be transmitted.

11. The method of claim 9, wherein the act of the arbiter predicting that the transaction should be transmitted is based at least in part upon the arbiter receiving a control signal

10      from the second repeater.

12. The method of claim 8 wherein the predetermined number of cycles is zero cycles.

13. The method of claim 8, wherein the act of determining if the control signal was

15      received includes determining if an INCOMING-L2 signal was received.

14. The method of claim 8 wherein the predetermined number of cycles is one cycle.

15. In a computer system having a first repeater, a second repeater, and a third repeater,

20      the first repeater coupled to the second repeater and the third repeater, the first repeater operable to transmit a transaction to the second repeater and operable to transmit a control signal to the second repeater, a method, performed by the second repeater, of generating an error comprising:

a) predicting, in a first cycle, that a transaction that originated from the third repeater should be transmitted from the first repeater to the second repeater;

b) determining if a control signal was received within a predetermined number of cycles of the first cycle; and

5    c) if the control signal was not received within the predetermined number of cycles of the first cycle, then generating an error.

16. The method of claim 15, wherein the act of predicting that a transaction should be transmitted includes an arbiter predicting that the transaction should be transmitted.

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17. The method of claim 16, wherein the act of an arbiter predicting that the transaction should be transmitted includes a distributed arbiter predicting that the transaction should be transmitted.

15   18. The method of claim 16, wherein the act of the arbiter predicting that the transaction should be transmitted is based at least in part upon the arbiter receiving a control signal from the second repeater.

19. The method of claim 15 wherein the predetermined number of cycles is zero cycles.

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20. The method of claim 15, wherein the act of determining if the control signal was received includes determining if an INCOMING-L2 signal was received.

21. The method of claim 15 wherein the predetermined number of cycles is one cycle.

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